

**FEATURES**

- Extended Temperature Range: -65 to +125°C.
- Outstanding resistance to humidity. Exceeds humidity cycling requirements of MIL-R-12934.
- Dual collector pick-off assures outstanding vibration and shock performance.
- Shaft supported front and rear by precision ball bearings\*.
- Housing: high temperature, moisture resistant, thermosetting plastic.
- Performance of the Model 3485 is guaranteed by the Bourns Reliability Program, which includes individual inspection to published electrical and physical characteristics.
- Custom design capability is available to satisfy your most demanding and difficult special requirements.



**MODEL 3485**  
**BOURNS POTENTIOMETER**  
**1 1/16" DIAMETER SINGLE-TURN SERVO MOUNT**  
**WIREWOUND ELEMENT**

**OBSOLETE** 1995

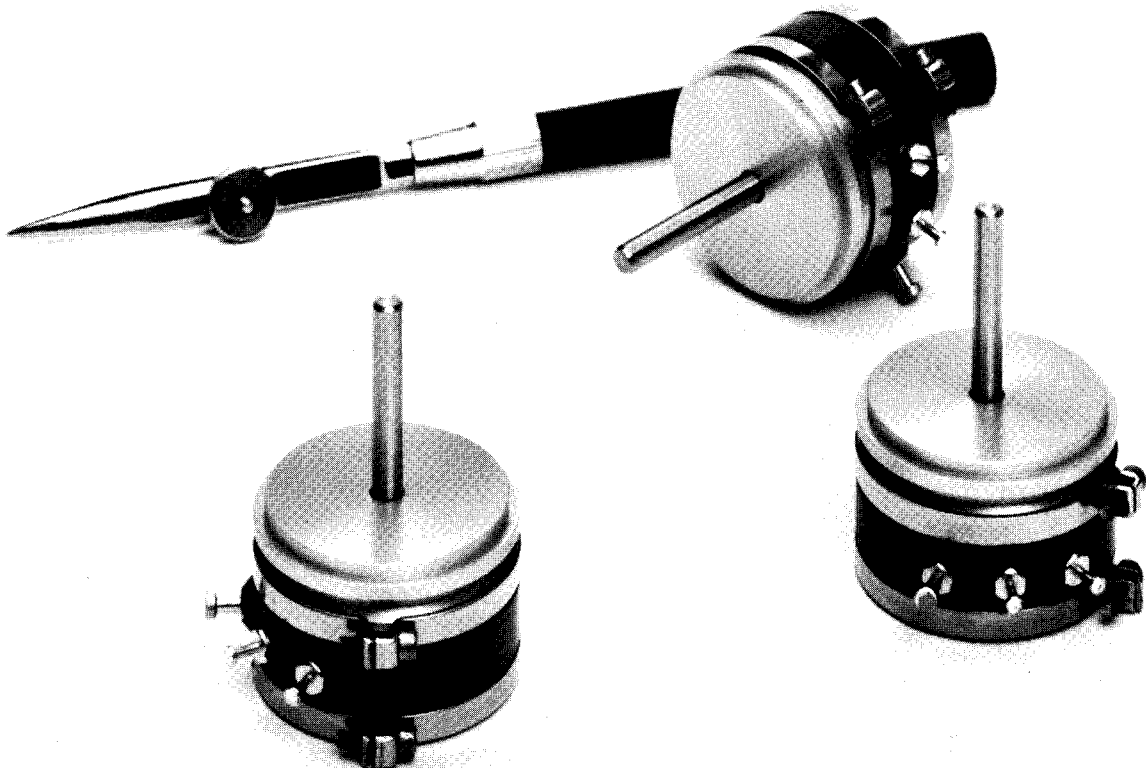
**STANDARD RESISTANCES**

Resistance (ohms)	Part Number**	Resolution (percent)
50	3485S-1-500	.304
100	3485S-1-101	.253
200	3485S-1-201	.215
500	3485S-1-501	.163
1,000	3485S-1-102	.162
2,000	3485S-1-202	.132

Resistance (ohms)	Part Number**	Resolution (percent)
5,000	3485S-1-502	.101
10,000	3485S-1-103	.081
20,000	3485S-1-203	.066
50,000	3485S-1-503	.052
100,000	3485S-1-104	.043

\*Sleeve Type bearings available at reduced cost (Model 3485S-92-RC).

\*\*The last three digits of the part number represent the resistance value in standard code.



**ELECTRICAL CHARACTERISTICS**

Standard Resistance Range	50Ω to 100K ohms
Resistance Tolerance*	±3%
Linearity (Independent)*	±0.5%
Resolution	See Standard Resistance Table
Effective Electrical Angle*	350° ±2°
Absolute Minimum Resistance*	1Ω or 0.1%, whichever is greater
Noise during adjustment*	100Ω maximum
<b>Power Ratings:</b>	
70°C	1.5 watts
125°C	0 watt
Dielectric Strength	MIL-R-12934
Room Conditions	1000 volts AC
70,000 feet	300 volts AC
Insulation Resistance, 500 volts DC*	1000 megohms minimum

**ENVIRONMENTAL CHARACTERISTICS**

Operating Temperature Range	-65 to +125°C
Temperature Coefficient of Resistance Wire	20 PPM/°C maximum
Humidity	MIL-R-12934, humidity cycling
Vibration	MIL-R-12934, 15G
Wiper Bounce	0.1 millisecond maximum
Wiper Shift	1.0% maximum
Shock	MIL-R-12934, 50G
Wiper Bounce and Wiper Shift	Same as vibration
Load Life	MIL-R-12934 4.6.20.2, 1000 hours
Resistance Shift, maximum	2.0%
Sand and Dust	MIL-E-5272
Fungus	MIL-E-5272
Salt Spray	MIL-R-12934

**MECHANICAL AND PHYSICAL CHARACTERISTICS**

Mechanical Angle	Continuous
Shaft Runout*	.001 in. T.I.R.
Shaft End Play*	.003 in. T.I.R.
Shaft Radial Play*	.002 in T.I.R.
Pilot Diameter Runout*	.0015 in. T.I.R.
Lateral Runout*	.002 in. T.I.R.
Rotational Life	2,000,000 shaft revolutions
Moment of Inertia	0.12 gm cm <sup>2</sup>
<b>Torque*</b>	
Starting	0.1 oz.-in. maximum
Running	0.1 oz.-in. maximum (Add 75% for each additional cup)
Ganging	8 cups maximum
Weight	Approximately 0.7 oz.
Terminals	Gold plated turrets
Markings*	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram and date code

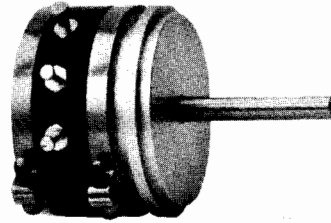
**NOTES**

\*100% or statistical sampling inspection performed to insure highest quality.  
Specifications are subject to change without notice.

**BOURNS POTENTIOMETER  
1 1/16" DIAMETER SINGLE-TURN  
SERVO MOUNT WIREWOUND ELEMENT**

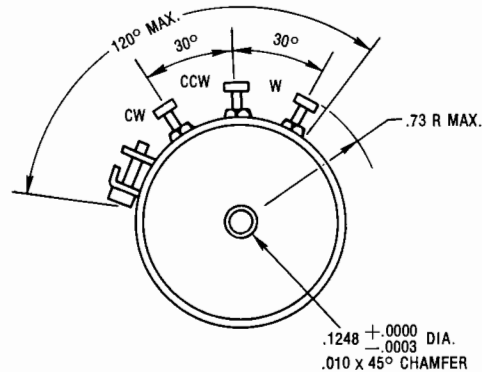
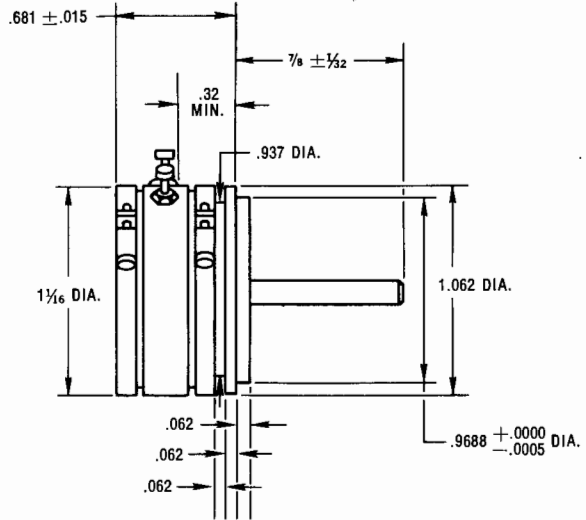
**MODEL 3485**

Actual Size

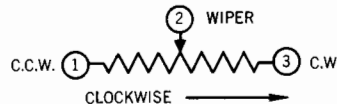


3485

SERVO SIZE 11



NOTE:  
ADD .405 TO .681 DIM FOR EACH ADDITIONAL CUP.



TOLERANCES: EXCEPT WHERE NOTED  
DECIMALS: XX ± .010, XXX ± .005  
FRACTIONS: ± 1/4



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